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CAPITAL STRUCTURE, LIQUIDITY, AND STOCK RETURNS

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Applied study on Amman Stock Exchange

Abstract

This paper investigates how stock returns are influenced by non- profit indicators derived from corporate financial reports, the study used capital structure and liquidity ratio as nonprofit parameters. We examined the financial statements of (15) industrial firms listed on Amman Stock Exchange for the period 2009 to 2012 which intervened by the world financial crisis. The result shows that there is a weak and significant relation between stock returns and liquidity, while the relationship with capital structure was also weak but insignificant. The study concluded that non-profit indicators were less valued in equity investment decisions during this period which may seem surprising since these indicators represent a bankruptcy risks. Furthermore, this may also be regarded as an evidence of stock market inefficiency which may be verified by examining other profit and nonprofit variables.

Keywords: Capital Structure, liquidity, stock return, Debt

Introduction

How stock market evaluates non-profit indicators in stock trading decisions, and what is the direction of this evaluation especially during financial crises? This goal will be attained through examining the relationship between stock return and non-profit indicators (capital structure & liquidity), beside; the study aims to discover the nature of stock market efficiency in reflecting non-profit information in stock prices.

Capital structure resents a dilemma strategic choice for corporate managers in financing decisions that it has dual effect on the profitability and the risk associated with firm operations in the short and long run (Velnampy, 2012). Therefore, this challenge will influence the ultimate goal of the firms is to maximize the wealth of stockholder and therefore its value of the firm (Miller & Modigliani, 1958, 1963; Miller, 1977).

The relationship between capital structure and profitability has been the subject of remarkable milestone over the past decade throughout the irrelevance theory (T. Velnampy & J. Aloy Niresh, 2012). What is the best choice is of debt and equity that enhance profitability. And also if interest expense is not tax deductible, will firms' owners be indifferent as to whether they used debt or equity **(Azhagaiah and Gavoury, 2011).**

The financial ratio can be defined as a relationship between a two individual quantitative financial information connected with each other in some logical manner, and this connection, is considered as a meaningful financial indicator which can be used by the different financial information users (M. Kabajeh, S. AL Nu'aimat, et al, 2012). And one of the most of these financial ratios is the Liquidity Ratio.

(Salehi, M., 2008 stated that investors attempt to invest on the items of assets, which have such characteristics the highest yield, lowest risk, and most power of Liquidity).

Literature Review

(Ong Tze San,2011) investigated the relationship of capital structure and corporate performance of firm before and during crisis (2007). This study focuses on construction companies which are listed in Main Board of Bursa Malaysia from 2005 to 2008. The result shows that there is relationship between capital structure and corporate performance and there is also evidence shows that no relationship between the variables investigated. For big companies, ROC with DEMV and EPS with LDC have a positive relationship whereas EPS with DC is negatively related. In the interim, only OM with LDCE has positive relationship in medium companies and EPS with DC has a negative relationship in small companies. In sum, the outcome reveals that the relationship exists between capital structure and corporate performance in selected proxies.

(Babalola, Yisau Abiodun,2012)examined an optimal capital structure to maximize the performance of the selected firms under the same systematic risk. They investigate the relation between return on equity (ROE) and the capital structure for a sample of 10 firms from 2000 to 2009. The study explores the empirical implications that there exists an optimal capital structure under trade-off theory and the optimal capital structure of manufacturing firms. At the same time, find the optimal capital structure and their concerning maximum value of ROE. The target ratio may change over time as the firm's performance and environments change. When firms adjust their capital structure, they tend to move toward an optimal debt ratio consistent with the historical financial behaviors of firms.

(M. Al Nimer, L. Warrad, R. Al Omari, 2013) this study sought to find out whether liquidity through quick ratio has significant impact on

Jordanian banks profitability through return on asset (ROA). The study used the 2005-2011 financial reports of 15 Jordanian banks listed at Amman Stock Exchange (ASE). The study revealed that there is significant impact of independent variable quick ratio on dependent variable return on asset (ROA). That means profitability through return on assets (ROA) in Jordanian banks is significantly influenced by liquidity through quick ratio.

(M. Kabajeh, S. AL Nu'aimat, et al, 2012, the purpose of this study is to examine the relationship between the ROA, ROE and ROI ratios together and separately with Jordanian insurance public companies share prices during the period (2002-2007). Based on the empirical evidence, the results showed a positive relationship between the ROA, ROE and ROI ratios together with Jordanian insurance public companies share prices. The results also showed a positive but low relationship between each of ROA ratio separately and ROI ratio separately with Jordanian insurance public companies share prices. However, the results showed no relationship between the ROE ratio separately with Jordanian insurance public companies market share prices.

(R. Azhagaiah, C. Gavoury, 2011) the present study mainly analyses how far the capital structure (CS) affects the Profitability (P) of corporate firms in India. The study tries to establish the hypothesized relationship as to how far the CS affects the business revenue of firms and what the interrelationship is between CS and Profitability. This study is carried out after categorizing the selected firms into three categories based on two attributes, viz. business revenue and asset size. First, firms are grouped into low, medium and high based on business revenue. Second, firms are classified into small, medium and large based on asset size to establish the hypothesized relationship that CS has significant impact on Profitability of Information Technology (IT) firms in India. For the study, a sample of 102 it firms was chosen by the Multi- Stage Sampling Technique. The data for a period of 8 years ranging from 1999–2000 to 2006–2007 have been collected and considered for analysis. Regression Analysis (to analyze the unique impact of CS on Profitability), in addition to descriptive statistics such as Mean, Standard Deviation, and Ratios has been used. The study proves that there has been a strong one-to-one relationship between CS variables and Profitability variables, Return on Assets (ROA) and Return on Capital Employed (ROCE) and the CS has significant influence on Profitability, and increase in use of debt fund in CS tends to minimize the net profit of the IT firms listed in Bombay Stock Exchange in India.

(G. Amarjit. et al, 2011) this paper seeks to extend Abor's (2005) findings regarding the effect of capital structure on profitability by examining the effect of capital structure on profitability of the American service and manufacturing firms. A sample of 272 American firms listed on

New York Stock Exchange for a period of 3 years from 2005 - 2007 was selected. The correlations and regression analyses were used to estimate the functions relating to profitability (measured by return on equity) with measures of capital structure.

Empirical results show a positive relationship between:

i) Short-term debt to total assets and profitability and

ii) Total debt to total assets and profitability in the service industry.

The findings of this paper show a positive relationship between

i) Short-term debt to total assets and profitability,

ii) Long-term debt to total assets and profitability, and

iii) Total debt to total assets and profitability in the manufacturing industry.

This paper offers useful insights for the owners/operators, managers, and lending institutions based on empirical evidence.

(T. Velnampy & J. Niresh, 2012) investigate the relationship between capital structure and profitability of ten listed Srilankan banks over the past 8 year period from 2002 to 2009. Results of the analysis show that there is a negative association between capital structure and profitability except the association between debt to equity and return on equity.

Further the results suggest that 89% of total assets in the banking sector of Sri Lanka are represented by debt, confirming the fact that banks are highly geared institutions.

(M. Shubita, J. Alsawalhah 2012) This study seeks to extend Abor's (2005), and Gill, et al., (2011) findings regarding the effect of capital structure on profitability by examining the effect of capital structure on profitability of the industrial companies listed on Amman Stock Exchange during a six-year period (2004-2009).

The results reveal significantly negative relation between debt and profitability. This suggests that profitable firms depend more on equity as their main financing option.

(M. Shubita, 2013) This study investigates the relationship between working capital management and profitability and introduces empirical evidence about working capital management and its effect to the profitability of Industrial Jordanian companies listed in Amman Stock Exchange. The result shows that there are significant negative associations between working capital variables with firm's profitability so it highlights the importance of managing working capital to improve firm's profitability.

(P. Weber and B. Rosenow, 2004) Analyze large stock price changes of more than five standard deviations for

i) TAQ data for the year 1997 and

ii) Order book data from the Island ECN for the year 2002.

We argue that large price changes are not due to large trading volumes. Instead, we find that extreme price fluctuations are mainly caused by a low density of limit orders stored in the order book, i.e. a small liquidity.

(M.Salehi, and et al, 2011) Several studies about the relationship between stock returns and liquidity indicate a negative relationship between them. In current study, the relationship between stock returns and its liquidity ability in companies listed in Tehran Stock Exchange has been investigated. For this study, monthly data, during years 2002-2009 have been used. The results of the study indicate that there is negative correlation between stock returns with its liquidity. The outcomes of current study support negative relationship presumption between stock returns and its liquidity ability.

Methodology

Data source

The study depends on secondary data derived from Amman Stock Exchange (www. ase.com).

Data analysis

Study will analyzed the following statistics test:

1. Descriptive statistics.
2. Correlations.
3. Regressions.

Model

Stock returns = $\beta_0+\beta_1X_1+\beta_2 X_2+ \varepsilon$

X1= capital structure, X_2= liquidity

Population & sample of study

Unlike of the Most of the studies reviewed which focused on the financial sector corporations, this study attempted to examine the industrial sector. The importance of this sector stems from its main and direct role in economic growth and development of any country?

The study applied on (69) Jordanian Industrial Companies which are listed in Amman Stock Exchange as on June 2014, which is represent of 30% of the market.

We choose random sample of 15 company's represent ≈ 22% of population, as listed below:

Sectors	Number of firms	%of population
Pharmaceutical and Medical Industries	2	0.029
Chemical Industries	2	0.029
Food and Beverages	2	0.029
Mining and Extraction Industries	3	0.043
Engineering and Construction	2	0.029
Electrical Industries	1	0.014
Textiles, Leathers and Clothing's	1	0.029
Glass and Ceramic Industries	1	0.014
Total	15	0.216

We find the ratio of yearly stock return, capital structure, and liquidity as $(\boldsymbol{p1/p0-1})$ for the period of (2009-2012) ,this study consists of main dependent variable which is stock return, and two independent variable, capital structure and liquidity.

Result Analysis

Descriptive statistics

Table (1)

		Stock Return	Debt Ratio	Liquidity
N	Valid	**60**	**60**	**60**
	Missing	**0**	**0**	**0**
Mean		**-.1000**	**.1780**	**-.0689**
Median		**-.1100**	**.0520**	**-.0410**
Mode		**-.03**	**-.07(a)**	**-.08(a)**
Std. Deviation		**.26781**	**.60378**	**.23930**
Minimum		**-.72**	**-.30**	**-.82**
Maximum		**.75**	**4.26**	**.53**
Sum		**-6.00**	**10.68**	**-4.13**

By finding the (Mean, Std. Deviation, Minimum, and Minimum value) for the sample of study, table (1) shows that the mean of stock return -10% and the standard deviation 26.7%, The mean of debt ratio 17.8% and the standard deviation 60.3%, the mean of liquidity -6.8% and standard deviation23.9%.

The big difference on stock return, capital structure, and liquidity, may due to nature of each industry's sector and the activity each firms.

So in the period of study (2009-2012) the Textiles, Leathers and Clothing's Industries sector has the high average stock price and the lowest sector was Glass and Ceramic Industries .In Capital structure (debt ratio) the largest capital structure is Pharmaceutical and Medical Industries sectors and the lowest was Food and Beverages sector .But in liquidity Textiles, Leathers

and Clothing's sector has the higher liquidity and the lowest was Glass and Ceramic Industries.

Bivariate Correlations

Table (2)

		Stock Return	Capital structure	Liquidity
Stock Return	Pearson Correlation	**1**	**-.071**	**-.256(*)**
	Sig. (2-tailed)		**.587**	**.049**
	Sum of Squares and Cross-products	**4.231**	**-.682**	**-.967**
	Covariance	**.072**	**-.012**	**-.016**
	N	**60**	**60**	**60**
Capital structure	Pearson Correlation	**-.071**	**1**	**-.191**
	Sig. (2-tailed)	**.587**		**.143**
	Sum of Squares and Cross-products	**-.682**	**21.508**	**-1.632**
	Covariance	**-.012**	**.365**	**-.028**
	N	**60**	**60**	**60**
Liquidity	Pearson Correlation	**-.256(*)**	**-.191**	**1**
	Sig. (2-tailed)	**.049**	**.143**	
	Sum of Squares and Cross-products	**-.967**	**-1.632**	**3.379**
	Covariance	**-.016**	**-.028**	**.057**
	N	**60**	**60**	**60**

According to table (2), the relation between stock returns, capital structure was weak and not significant that P (-0.071). The relationship between stock return and liquidity was also weak at (P -.256) but it was significant, this mean that liquidity factor has an influence on the stock returns unlike capital structure. Moreover, there is a weak and insignificant relationship between capital structure and liquidity.

Model

Table (3)

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.284(a)	.080	.048	.26128

Predictors: (Constant), c.ratio, debt

Table (4)

ANOVA (b)						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.340	2	.170	2.493	.092(a)
	Residual	3.891	57	.068		
	Total	4.231	59			

a Predictors: (Constant), c.ratio, debt
b Dependent Variable: stock return

Table (5)

Coefficients (a)						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta	B	Std. Error
1	(Constant)	-.112	.036		-3.094	.003
	debt	-.055	.057	-.125	-.966	.338
	c.ratio	-.313	.145	-.280	-2.161	.035

a Dependent Variable: stock return

from table (3) Model Summary we find that $R^2 = 0.080$ which mean that only 8% of variation in stock returns is by variation in capital structure and liquidity ratio and from table (5) Coefficients $\beta = 0.284$ at significant level of 0.03(β =0.284, P≤ 0.03), table (4) ANOVA we find that the value of F = 2.493 at df 2, which is less than F from tables ≈ 3.15 which consist from previous result that stock return affect by some capital structure and liquidity and other factors.

According to that we can set the equation

$$\mathbf{Y = -0.112 – 0.055\ X_1 - 0.313\ X_2 + \varepsilon}$$

The model suggests that the study variable has negative effect on producing stock returns, and other variable has the most produce effect.

Conclusion

The aim of study is to examine the relationships between of stock return, capital structure, and liquidity on firms in industrial sector after crisis2009-2012. the results of analysis shows weak and not significant relation between stock returns, capital structure but the relationship between stock return and liquidity was weak but significant, this mean that liquidation has influence the stock returns but not influence by capital structure. And also the study confirms that investing decision is no affected by t non-profit indicators (capital structure and liquidity).

1. The result also indicates that there are no relationships between the various variables that have been examined and will not affected the investing decision, but the investing decision affected by other variables such as size of the firm, or dividend, or ROE, or EPS and so on.
2. More studies after the financial crisis period to explore if this influence in the same level and direction or not.
3. Apply this study on other sectors.
4. Make other studies to attain more information about the investing decision and it's relating with financial statements, such as distributing questionnaires to sample of investor and executive

managers in Amman Stock Exchange to know which factor s take into account in the investing decision.

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